

Amendments to the Claims:

The following provides the amended claims in the proper format for a reissue application, showing changes relative to the patent specification in effect as of the date of filing of the reissue application, in accordance with MPEP §1453 and 37 CFR §1.173.

1. (Amended) A composition of matter comprising:
a solid phase support having one or more spacially discrete regions; and
a [uniform] population of [substantially] identical oligonucleotide tag complements covalently attached to the solid phase support in at least one of the one or more spacially discrete regions, the oligonucleotide tag complements comprising a plurality of subunits, each subunit consisting of an oligonucleotide having a length from three to six nucleotides and each subunit being selected from a minimally cross-hybridizing set, wherein a subunit of the set and a component of any other subunit of the set would have at least two mismatches.
2. (Original) The composition of matter of claim 1 wherein said plurality of said subunits is in the range of from 4 to 10.
3. (Original) The composition of matter of claim 2 wherein said solid phase support is a microparticle having a single spacially discrete region.
4. (Amended) The composition of matter of claim 3 wherein said microparticle[s] is selected from the group consisting of glass microparticles, magnetic beads, and polystyrene microparticles.
5. (Four times amended) A composition of matter comprising a plurality of from ten thousand to a hundred thousand different polynucleotides, selected from cDNA molecules or fragments of a target polynucleotide to be analyzed or sequenced, said composition including a mixture of microparticles,
wherein each microparticle has identical polynucleotides of the plurality attached thereto,

and wherein substantially all different polynucleotides in the plurality are attached to different microparticles.

6. (Twice amended) The composition of claim 5 wherein each microparticle has about 10^5 identical polynucleotides attached thereto.

9. (Four times amended) A composition of matter comprising a plurality of different polynucleotides, selected from cDNA molecules or fragments of a target polynucleotide to be analyzed or sequenced, said composition including a mixture of microparticles,

wherein tag complements are attached to each said microparticle,

and wherein each said cDNA molecule or fragment has an oligonucleotide tag attached, such that substantially all the same molecules have the same oligonucleotide tag attached and substantially all different molecules have different oligonucleotide tags attached,

such that perfectly matched duplexes are formed between the tag complements of said microparticles and the oligonucleotide tags of said cDNA molecules or fragments;

whereby, each microparticle has identical polynucleotides of the plurality attached thereto, and substantially all different polynucleotides in the plurality are attached to different microparticles.

The following is a courtesy copy of the pending claims, showing changes relative to the prior pending version, amended in accordance with 37 CFR §1.121.

1. (Previously presented) A composition of matter comprising:
a solid phase support having one or more spacially discrete regions; and
a population of identical oligonucleotide tag complements covalently attached to the solid phase support in at least one of the one or more spacially discrete regions, the oligonucleotide tag complements comprising a plurality of subunits, each subunit consisting of an oligonucleotide having a length from three to six nucleotides and each subunit being selected from a minimally cross-hybridizing set, wherein a subunit of the set and a component of any other subunit of the set would have at least two mismatches.
2. (Original) The composition of matter of claim 1 wherein said plurality of said subunits is in the range of from 4 to 10.
3. (Original) The composition of matter of claim 2 wherein said solid phase support is a microparticle having a single spacially discrete region.
4. (Previously presented) The composition of matter of claim 3 wherein said microparticle is selected from the group consisting of glass microparticles, magnetic beads, and polystyrene microparticles.
5. (Previously presented) A composition of matter comprising a plurality of from ten thousand to a hundred thousand different polynucleotides, selected from cDNA molecules or fragments of a target polynucleotide to be analyzed or sequenced, said composition including a mixture of microparticles,
wherein each microparticle has identical polynucleotides of the plurality attached thereto,
and wherein substantially all different polynucleotides in the plurality are attached to different microparticles.

6. (Previously presented) The composition of claim 5 wherein each microparticle has about 10^5 identical polynucleotides attached thereto.

7-8. (Cancelled)

9. (Currently amended) A composition of matter comprising a plurality of different polynucleotides, selected from cDNA molecules or fragments of a target polynucleotide to be analyzed or sequenced, said composition including a mixture of microparticles,

wherein tag complements are attached to each said microparticle,

and wherein each cDNA molecule or fragment has an oligonucleotide tag attached, such that substantially all the same molecules have the same oligonucleotide tag attached and substantially all different molecules have different oligonucleotide tags attached,

such that perfectly matched duplexes are formed between the tag complements of said microparticles and the oligonucleotide tags of said cDNA molecules or fragments;

whereby, each microparticle has identical polynucleotides of the plurality attached thereto, and substantially all different polynucleotides in the plurality are attached to different microparticles.

10-13. (Cancelled)